

AMENDMENTS TO THE CLAIMS
(with complete listing)

1. (Currently amended) A method for coupling a plurality of risers or umbilicals having lower ends fixed to an area of the sea floor to a floating vessel having a hull with a keel and moored generally above said area, the method comprising the steps of,

enduringly suspending said risers or umbilicals from an elevation above said ~~keel~~
hull, and

laterally supporting said risers or umbilicals at points along the perimeter of said hull.

2. (Currently amended) The method of claim 1 ~~wherein~~ further comprising the step of,
laterally supporting said risers or umbilicals ~~said points are disposed below the~~
waterline.

3. (Currently amended) The method of claim 1 ~~wherein~~ further comprising the step of,
laterally supporting said risers or umbilicals ~~said points are disposed at an elevation~~
generally corresponding to the elevation of said keel.

4. (Currently amended) The method of claim 1 ~~wherein~~ further comprising the step of,
laterally supporting said risers or umbilicals at said points are disposed on outboard-
facing surfaces of said hull.

5. (Currently amended) The method of claim 1 ~~wherein~~ further comprising the step of,
laterally supporting said risers or umbilicals at said points are disposed on inboard-
facing surfaces of said hull.

6. (Currently amended) The method of claim 1 ~~wherein~~ further comprising the step of,
laterally supporting said risers or umbilicals at said points are disposed on surfaces of
a moonpool in said vessel.

7. (Currently amended) The method of claim 1 further comprising the steps of,
providing a bearing at each of said points, and

~~said bearing designed and arranged to allowing~~ axial movement of said riser relative to said vessel.

8. (Currently amended) The method of claim 1 wherein said step of laterally supporting said risers or umbilicals further comprises the step of,

providing said supporting is performed by a plurality of keel guides disposed at said points.

9. (Currently amended) The method of claim 8 ~~wherein further comprising the step of,~~
~~at least one of said keel guides is designed and arranged to allowing~~ side entry of one of said risers or umbilicals into at least one of said keel guides.

10. (Currently amended) The method of claim 8 ~~wherein further comprising the step of,~~
~~at least one of said keel guides is designed and arranged for allowing~~ vertical entry of one of said risers or umbilicals into at least one of said keel guides.

11. (Original) The method of claim 1 wherein said suspending further comprises the steps of,

tensioning said risers or umbilicals, and

allowing said risers or umbilicals to move axially with respect to said vessel.

12. (Original) The method of claim 1 further comprising the step of,
suspending said risers or umbilicals with a generally vertical orientation.

13. (Original) The method of claim 1 further comprising the step of,
suspending said risers or umbilicals from an elevation above the waterline.

14. (Currently amended) The method of claim 1 ~~wherein further comprising the step of,~~
~~said suspending is performed~~ said risers or umbilicals by a spring.

15. (Cancelled)

16. (Currently amended) A method for coupling a plurality of risers or umbilicals having lower ends fixed to an area of the sea floor to a floating vessel having a submerged hull with a keel and moored generally above said area, the method comprising the steps of,
- enduringly suspending said risers or umbilicals from an elevation above said keel, and laterally supporting said risers or umbilicals in vertical passages formed through said hull.
17. (Currently amended) The method of claim 16 further comprising the steps of, providing a bearing in each of said passages, ~~said bearing designed and arranged to allowing~~ axial movement of said riser relative to said vessel.
18. (Original) The method of claim 16 wherein said suspending further comprises the steps of,
- tensioning said risers or umbilicals, and
- allowing said risers or umbilicals to move axially with respect to said vessel.
19. (Original) The method of claim 16 further comprising the step of, suspending said risers or umbilicals with a generally vertical orientation.
20. (Original) The method of claim 16 further comprising the step of, suspending said risers or umbilicals from an elevation above the waterline.
21. (Currently amended) The method of claim 16 ~~wherein~~ further comprising the step of, said-suspending is performed-said risers or umbilicals by a spring.
22. (Cancelled)
23. (Currently amended) A floating vessel comprising,
- a submerged buoyant hull having a keel,
- a column having a lower end coupled to said hull, said column extending above the waterline,
- a deck coupled to an upper end of said column,

a mooring device having an upper end coupled to said hull and a lower end coupled to the seabed,

a keel guide having a vertically oriented generally cylindrical passage therein coupled to an exterior surface of said hull, and

a tensioner coupled to said vessel and disposed at an elevation above said hull, and

a riser or umbilical having a lower end coupled to the seabed and an upper end enduringly coupled to said ~~vessel~~ tensioner, said riser or umbilical passing within said passage of said keel guide.

24. (Original) The vessel of claim 23 wherein,
said mooring device is generally vertically oriented and tensioned by said buoyant hull.

25. (Original) The vessel of claim 23 wherein,
said riser or umbilical is generally vertically oriented and tensioned by said buoyant hull.

26. (Currently amended) The vessel of claim 23 further comprising,
a keel joint disposed between said riser or umbilical and said keel guide, said keel joint having a bearing disposed adjacent to said riser or umbilical, wherein said bearing is designed and arranged to provide lateral support to said riser or umbilical while allowing said riser or umbilical to move in a longitudinal direction within said keel guide.

27. (Original) The vessel of claim 23 wherein,
said keel guide is disposed at an outboard-facing surface of said hull.

28. (Original) The vessel of claim 23 wherein,
said keel guide is disposed at an inboard-facing surface of said hull.

29. (Original) The vessel of claim 23 wherein,
said keel guide is disposed in a moonpool in said hull.

30. (Original) The vessel of claim 23 wherein,
said keel guide has a slot which communicates with said passage and which is
designed and arranged to allow side entry of said riser or umbilical.
31. (Original) The vessel of claim 23 wherein,
said keel guide is disposed at an elevation generally corresponding to the elevation of
said keel.
32. (Original) The vessel of claim 23 wherein,
said keel guide is disposed at an elevation generally corresponding to the elevation of
said upper end of said mooring device.
33. (Cancelled)
34. (Currently amended) The vessel of claim ~~33~~ 23 wherein,
said tensioner is disposed above the waterline.
35. (Currently amended) The vessel of claim ~~33~~ 23 wherein,
said tensioner is disposed on said deck.
36. (Currently amended) A floating vessel comprising,
a submerged buoyant hull having a keel,
a column having a lower end coupled to said hull, said column extending above the
waterline,
a deck coupled to an upper end of said column,
a mooring device having an upper end coupled to said hull and a lower end coupled to
the seabed,
an aperture vertically formed through said hull, ~~and~~
a tensioner coupled to said vessel and disposed at an elevation above said hull, and

a riser or umbilical having a lower end coupled to the seabed and an upper end enduringly coupled to said ~~vessel~~ tensioner, said riser or umbilical passing within said passage of said keel guide.

37. (Original) The vessel of claim 36 wherein,
said mooring device is generally vertically oriented and tensioned said buoyant hull.
38. (Original) The vessel of claim 36 wherein,
said riser or umbilical is generally vertically oriented and tensioned by said buoyant hull.
39. (Original) The vessel of claim 36 further comprising,
a keel joint disposed between said riser or umbilical and said aperture, said keel joint designed and arranged to provide lateral support to said riser or umbilical while allowing said riser or umbilical to move in a longitudinal direction within said aperture.
40. (Cancelled)
41. (Currently amended) The vessel of claim ~~36~~40 wherein,
said tensioner is disposed above the waterline.
42. (Currently amended) The vessel of claim ~~36~~40 wherein,
said tensioner is disposed on said deck.
43. (Currently amended) The vessel of claim ~~36~~40 wherein,
said riser or umbilical is generally vertically oriented and tensioned by said tensioner.